


| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p><b>INFORMATION DISCLOSURE STATEMENT</b></p> </div> <div style="text-align: right;"> <p>ATTORNEY<br/>DOCKET NO:<br/>022002-03</p> <p>APPL. NO.<br/>10717,046</p> </div> </div> |                 |   |            |                    |              |                |     |    |  |  |
|--|-----------------|---|------------|--------------------|--------------|----------------|-----|----|--|--|
| <div style="display: flex; justify-content: space-between;"> <div> <p>APPLICANT<br/>David Lush et al.</p> </div> <div> <p>FILING DATE<br/>Nov. 19, 2003</p> </div> <div> <p>GROUP<br/>3672</p> </div> </div>   |                 |   |            |                    |              |                |     |    |  |  |
| U. S. PATENT DOCUMENTS   |                 |   |            |                    |              |                |     |    |  |  |
| *Exam.<br>Initial  | DOCUMENT NUMBER | DATE  | NAME       | CLASS              | SUB<br>CLASS | FILING<br>DATE |     |    |  |  |
| <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <p>12</p> </div> </div>   | AA              | 3 2 5 2 4 3 9   | 05/24/1966 | Shatto, Jr. et al. | 114          | 257            |     |    |  |  |
|  | AB              | 3 6 0 2 7 0 1   | 08/31/1971 | Boyd, Jr.          | 700          | 36             |     |    |  |  |
|  | AC              | 3 6 0 8 6 3 0   | 09/28/1971 | Wooden et al.      | 166          | 357            |     |    |  |  |
|  | AD              | 3 6 4 3 7 3 6   | 02/22/1972 | Talley, Jr.        | 166          | 356            |     |    |  |  |
|  | AE              | 4 0 4 6 1 9 1   | 09/06/1977 | Neath              | 166          | 352            |     |    |  |  |
|  | AF              | 4 1 4 9 6 0 3   | 04/17/1979 | Arnold             | 175          | 7              |     |    |  |  |
|  | AG              | 4 2 9 1 7 7 2   | 09/29/1981 | Beynet             | 175          | 5              |     |    |  |  |
|  | AH              | 4 5 2 7 6 3 2   | 07/09/1985 | Chaudot            | 166          | 357            |     |    |  |  |
|  | AI              | 4 5 7 7 7 0 0   | 03/25/1986 | Dellinger et al.   | 175          | 40             |     |    |  |  |
|  | AJ              | 4 6 5 1 8 3 6   | 03/24/1987 | Richards           | 175          | 62             |     |    |  |  |
| <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <p>13</p> </div> </div>   | AK              | 4 8 4 8 4 7 5   | 07/18/1989 | Dean et al.        | 166          | 357            |     |    |  |  |
| FOREIGN PATENT DOCUMENTS   |                 |   |            |                    |              |                |     |    |  |  |
|  | DOCUMENT NUMBER | PUBLICATION<br>DATE   | COUNTRY    | CLASS              | SUB<br>CLASS | TRANSLATION    |     |    |  |  |
| <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <p>14</p> </div> </div>   | AL              | 2 2 6 0 0 8 7   | 04/07/1993 | UK                 |              |                | Yes | No |  |  |
| OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, Place of Publication, Etc.)   |                 |   |            |                    |              |                |     |    |  |  |
| <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <p>15</p> </div> </div>   | AM              | Strand, B. and Bakke, W., "Subsea Separation on the Troll Field," <u>Scandinavian Oil-Gas Magazine</u> , July 8, 1998, pp. 122-124.   |            |                    |              |                |     |    |  |  |
|  | AN              | Baggs, C., Kent, I., and Allen, John, "Troll Pilot Control System: Advanced Control System for a Subsea Separator," Offshore Technology Conference (OTC) 12154, May 1-4, 2000, pp 1-10. |            |                    |              |                |     |    |  |  |
|  | AO              | Arnold, K.E. and Ferguson, P.L., "Tomorrow's Compact Separation Train," <u>Hart's E&amp;P</u> , December 1999, pp. 80-82.   |            |                    |              |                |     |    |  |  |
|  | AP              | Fjósne, E., "Subsea Processing – Maximising Value in Areas With Existing Infrastructure," Offshore Technology Conference (OTC) 14008, May 6-9, 2002, pp. 1-5.                           |            |                    |              |                |     |    |  |  |
|  | AQ              | Eriksen, S., "How Can Subsea Processing Remove Topsides Processing Constraints," FMC Energy Systems, FMC Kongsberg Subsea, August 30, 2001, 11 pages.                                   |            |                    |              |                |     |    |  |  |
|  | AR              | Davalath, J. "Economic Benefits of Compact Subsea Separation System," FMC Energy Systems, Deep Offshore Technology 1999, 14 pages.  |            |                    |              |                |     |    |  |  |
| <p>Examiner: <u>Thomas</u> Date Considered <u>9/24/03</u></p>  |                 |   |            |                    |              |                |     |    |  |  |
| <p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and <u>not</u> considered. Include copy of this form with the next communication to applicant.</p>   |                 |   |            |                    |              |                |     |    |  |  |

| <b>INFORMATION DISCLOSURE STATEMENT</b>   |    |   |   |   |   |   |   |   |                     |                |       | ATTORNEY<br>DOCKET NO:<br>022002-03 |                | APPL. NO.<br>10/17,046 |    |
|---|----|---|---|---|---|---|---|---|---------------------|----------------|-------|-------------------------------------|----------------|------------------------|----|
| APPLICANT<br>David Lush et al.  |    |   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| FILING DATE<br>Nov. 19, 2003  |    |   |   |   |   |   |   |   |                     |                |       | GROUP<br>3672                       |                |                        |    |
| <b>U. S. PATENT DOCUMENTS</b>   |    |   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| *Exam.<br>Initial   |    | DOCUMENT NUMBER   |   |   |   |   |   |   | DATE                | NAME           | CLASS | SUB<br>CLASS                        | FILING<br>DATE |                        |    |
| (1)   | BA | 4   | 9 | 0 | 0 | 4 | 3 | 3 | 02/13/1990          | Dean et al.    | 210   | 170                                 |                |                        |    |
|   | BB | 4   | 9 | 8 | 2 | 7 | 9 | 4 | 01/08/1991          | Houot          | 166   | 357                                 |                |                        |    |
|   | BC | 5   | 1 | 2 | 9 | 9 | 3 | 1 | 07/14/1992          | Oranje         | 55    | 399                                 |                |                        |    |
|   | BD | 5   | 1 | 6 | 4 | 7 | 4 | 1 | 10/13/1992          | da Costa Filho | 96    | 157                                 |                |                        |    |
|   | BE | 5   | 4 | 8 | 8 | 9 | 9 | 3 | 02/06/1996          | Hershberger    | 166   | 372                                 |                |                        |    |
|   | BF | 5   | 7 | 0 | 7 | 4 | 2 | 7 | 01/13/1998          | Stockman et al | 95    | 260                                 |                |                        |    |
|   | BG | 5   | 7 | 2 | 2 | 4 | 9 | 4 | 03/03/1998          | Landeck et al. | 175   | 7                                   |                |                        |    |
|   | BH | 6   | 0 | 0 | 4 | 3 | 8 | 5 | 12/21/1999          | Birmingham     | 96    | 174                                 |                |                        |    |
|   | BI | 6   | 0 | 6 | 2 | 3 | 1 | 3 | 05/16/2000          | Moore          | 166   | 357                                 |                |                        |    |
|   | BJ | 6   | 0 | 6 | 8 | 0 | 6 | 3 | 05/30/2000          | Shaw           | 166   | 267                                 |                |                        |    |
| (1)   | BK | 6   | 2 | 1 | 6 | 7 | 8 | 1 | 04/17/2001          | Knight         | 166   | 105.5                               |                |                        |    |
| <b>FOREIGN PATENT DOCUMENTS</b>   |    |   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
|   |    | DOCUMENT NUMBER   |   |   |   |   |   |   | PUBLICATION<br>DATE | COUNTRY        | CLASS | SUB<br>CLASS                        | TRANSLATION    |                        |    |
|   |    |   |   |   |   |   |   |   |                     |                |       |                                     |                | Yes                    | No |
|   | BL |   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| <b>OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, Place of Publication, Etc.)</b>   |    |   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| (1)   | BM | Songhurst, B.W. and Eyre, G.P., "Experience Gained From the First U.K. Subsea Separator," Offshore Technology Conference (OTC) 6423, May 7-10, 1990, pp. 43-50.   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
|   | BN | Smith, J.R., "The Highlander Field: Eight Years On," Offshore Technology Conference (OTC) 7438, May 2-5, 1994, pp. 177-187.                                       |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
|   | BO | Crook, J. "Seabed Separation First for Troll," Petroleum Review, March 1999, pp. 31-32.   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
|   | BP | "SUBSIS: Subsea Separation and Injection System," ABB Offshore Systems, ABB Oil, Gas & Petrochemicals, (undated), 4 pages.  |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
|   | BQ | "Subsea Separation and Injection by ABB's SUBSIS," ABB Offshore Systems, <a href="http://www.abb.com/oilandgas">www.abb.com/oilandgas</a> , August 1999, 3 pages. |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| (1)   | BR | Davalath, J., Wessel, J., and Hatlo, A., "State of the Art in Subsea Pumping Technology," FMC Energy Systems, November 7-9, 2000, 11 pages.                       |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| Examiner: <i>JMS/BAV</i>  |    | Date Considered: <i>9/26/05</i>   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |
| *EXAMINAL if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant. |    |   |   |   |   |   |   |   |                     |                |       |                                     |                |                        |    |

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|--|----|-----------------|---|---|---|---|---|---|---------------------|----------|-------|-------------------------------------|----------------|-------------------------|----|
| APPLICANT<br>David Lush et al.   |    |                 |   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
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| U. S. PATENT DOCUMENTS   |    |                 |   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
| *Exam.<br>Initial  |    | DOCUMENT NUMBER |   |   |   |   |   |   | DATE                | NAME     | CLASS | SUB<br>CLASS                        | FILING<br>DATE |                         |    |
| (12)   | CA | 6               | 2   | 7 | 6 | 4 | 5 | 5 | 08/21/2001          | Gonzalez | 166   | 357                                 |                |                         |    |
| FOREIGN PATENT DOCUMENTS   |    |                 |   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  |    | DOCUMENT NUMBER |   |   |   |   |   |   | PUBLICATION<br>DATE | COUNTRY  | CLASS | SUB<br>CLASS                        | TRANSLATION    |                         |    |
|  |    |                 |   |   |   |   |   |   |                     |          |       |                                     |                | Yes                     | No |
|  | CB |                 |   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
| OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, Place of Publication, Etc.)   |    |                 |   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
| (2)  | CC |                 | "Helico-Axial Multiphase Pump, Deepwater Technology," Multiphase, Guinard Pumps, Textron Fluid Handling Products, May 1989, 12 pages.   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CD |                 | Technical Bulletin, "Increased Oil Production by Means of Subsea Processing," Framo Engineering AS, Bergen, Norway, January 1999, 4 pages.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CE |                 | Technical Bulletin, "Boosting - Increased Oil Production and Recovering Utilizing: Multiphase Pumps, Subsea Separator - SWAG," Framo Engineering AS, Bergen, Norway, November 1999, 4 pages.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CF |                 | Technical Bulletin, "Subsea Multiphase Pumps for Shell, Draugen," Framo Engineering AS, Bergen, Norway, May 1999, 4 pages.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CG |                 | Technical Bulletin, "Framo Subsea Multiphase Booster Pumps for BP ETAP," Framo Engineering AS, Bergen, Norway, April 1999, 4 pages.   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CH |                 | "Subsea Multiphase Pump," Kvaener Eureka a.s., Lier, Norway, (undated), 6 pages.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CI |                 | Technical Bulletin, "Increased Oil Production by Means of Subsea Multiphase Boosting," Framo Engineering AS, Bergen, Norway, November 1999, 4 pages.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CJ |                 | Rekve, S., "Fourth-Quarter Seafloor Pump Demo Set," Hart's E&P 5 <sup>th</sup> Deepwater Technology (undated), p. 31.   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CK |                 | "Multiphase Booster Pumps Provide Efficient Production Tool," Hart's E&P 5 <sup>th</sup> Deepwater Technology, (undated), p. 32.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CL |                 | Bradbury, J., "Pumping Up the Volume," Hart's E&P, October 2001, p. 29.   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
|  | CM |                 | "Hydraulic Turbine Drive Submersible Centrifugal Pumps," Weir Pumps, November 2001, pp. 1-2.  |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
| (3)  | CN |                 | Harden, W.G. and Downie, A.A., "Field Trial and Subsequent Large-Scale Deployment of a Novel Multiphase Hydraulic Submersible Pump in Texaco's Catina Field," Offshore Technology Conference (OTC) 13197, April 30-May 3, 2001, pp. 1-19. |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
| Examiner: <u>MASBAY</u> Date Considered: <u>9/24/01</u>  |    |                 |   |   |   |   |   |   |                     |          |       |                                     |                |                         |    |
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